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POSTER 1: RECONSTRUCTION INTERVENTION OF CAIS DAS COLUNAS, LISBON, PORTUGAL

A. de Carvalho Antunes ⁽¹⁾, E. Cansado Carvalho ⁽²⁾

GeoBioTec/Aveiro University; IHA/Nova University, Portugal ⁽¹⁾
GAPRES SA, Portugal ⁽²⁾

apc.antunes@clix.pt⁽¹⁾

eccarvalho@gapres.pt⁽²⁾



XI CONGRESO INTERNACIONAL DE REHABILITACIÓN DEL PATRIMONIO ARQUITECTÓNICO Y EDIFICACIÓN (EL PATRIMONIO IBÉRICO)

RECONSTRUCTION INTERVENTION OF CAIS DAS COLUNAS, LISBON, PORTUGAL

A. de Carvalho Antunes ⁽¹⁾, E. Cansado Carvalho ⁽²⁾

GeoBioTec/Aveiro University; IHA/Nova University, Portugal ⁽¹⁾
GAPRES SA, Portugal ⁽²⁾

apc.antunes@clix.pt⁽¹⁾ eccarvalho@gapres.pt⁽²⁾

ABSTRACT

The limestone quay Cais das Colunas was constructed after the 1755's great earthquake of Lisbon, in the decades 1770 to 1790.

In 1997, due to the construction of the underground tunnel under its foundations, the quay was partially removed/dismounted, in view of its later reconstruction.

In 2008, a meticulous intervention programme of reconstruction was put into practice, with technical specifications adjusted to its cultural and historical value and previously approved by the Institute of Heritage Management (IGESPAR). The quay was reconstructed using new systems and benefited of structural improvement. The aim of this paper/poster is to present the main aspects of the reconstruction intervention.

KEY WORDS: Cais das Colunas, Lisbon, Quay, Reconstruction, Rehabilitation

1. LOCATION AND BRIEF HISTORICAL CONTEXT

The quay Cais das Colunas is located in downtown Lisbon, on the right margin of River Tagus and integrates the big square known as Praça do Comércio [Figure 1] that was classified as National Heritage in 1910.



Figure 1 – Aerial view of downtown Lisbon, Praça do Comércio and Cais das Colunas, 1930-1932. [AFCLM, B080126]

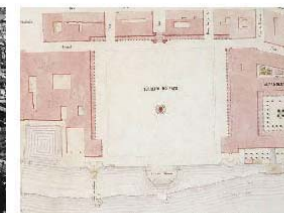


Figure 2 – Praça do Comércio and Cais das Colunas with the two other little quays, 1856-1858. [2]



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The large quay designated *Caes da Praça* and later *Caes da Praça do Commercio* was composed, until almost the end of the nineteenth century, by one central quay (Cais das Colunas) and two smaller ones, one at each side [Figure 2].

Since its construction, in 1770-1790, and until 1997 the Cais das Colunas suffered a few little repairs, apart from the successive replacements of its symbolic columns by variants of different shapes, dimensions and materials.

2. ABOUT THE DISMOUNTING

Due to the expansion of the underground lines of the city of Lisbon, the coastal monument was partially removed in 1997. The deconstruction, or partial removal, took four months, in the Spring/Summer of 1997. During the deconstruction each of the 1500 limestone blocks was carefully removed, marked with a number and then transported to a safe place. Later, urgent cleaning treatments on part of the limestone blocks were applied.



Figure 3 – Aerial view of Praça do Comércio and the remaining part of Cais das Colunas, during the construction of the underground tunnel, June 2000. [GEOFoto Scale]

The reconstruction project was initially planned to be completed in 1999. However, due to an accident during the construction of the tunnel, this date had to be postponed. During the summer of 2008 the historic quay was finally reconstructed.

3. RECONSTRUCTION INTERVENTION

The monumental quay was reconstructed using modern constructive systems. Structural corrections were made but each one of the stone blocks was replaced in its original position.

The contract for partial reconstruction of Cais das Colunas ran between May and September 2008. The intervention program included:

- Consolidation and strengthening of the foundation ground, particularly near the east column base;
- Establishment of criteria for the replacement of the blocks which at the date of its removal presented a high degree of decay [replacement of stone blocks that were in more than two fragments and/or with obvious lack of cohesion];



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- Removal of the original iron clamps, extremely invasive and harmful, and placement of a polypropylene and polyester grid integrated into the horizontal mortar joints in lateral walls – fastening it to the core of the quay;



Figure 4 – Part of the 1500 blocks to be reused. [ACA]



Figure 5 – During the reconstruction works. [ACA]

- For levelling, block settlement and for the joints, mortars suitable for maritime environment were employed, having been previously certified its compatibility either with the remaining core of the quay and the limestone blocks;

- Both columns were reinforced through a new system of plugins, fully reversible, consisting of stone powder and resin.

In addition to the relevant structural reinforcement, the intervention program aimed to fulfil:

- (1) The minimal intervention principle;
- (2) Reversibility of systems and materials used;
- (3) Compatibility between old materials and systems and new ones.

Acronyms

AFCML - Arquivo Fotográfico da Câmara Municipal de Lisboa
GEO - Gabinete de Estudos Olisiponenses da Câmara Municipal de Lisboa

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